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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,463	10/16/2003	Tetsu Takahashi	1614.1367	1888

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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

MOTSINGER, SEAN T

ART UNIT	PAPER NUMBER
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2624

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/31/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/685,463

Applicant(s)

TAKAHASHI, TETSU

Examiner

Sean Motsinger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/27/2004, 10/16/2003</u> | 6) <input type="checkbox"/> Other: _____ |

Rejections Under 35 U.S.C. 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
2. Re claims 1 and 5, Claims 1 and 5 recite "first frames" and "second frames" in such a manner that appears to intend that that some order is necessary. However it is not clear from the claim what that order is, for the purposes of examination examiner will interpret that applicant intended "a first set of frames" and "a second set of frames."
3. Re Claim 2 and 7, Claim 2 and 7 state: "...the second frames which are discarded are predictive-coded pictures contained in the input video sequence." However in applicants disclosure he describes the input as not coded in a predictive form but in NTSC format. It is unclear how the frames discarded could be "predictive-coded pictures" since they are never encoded by the encoder. For the purposes of examination examiner interprets the claim to read: "...the second frames, which are discarded, are pictures contained in the input video sequence."

4. Re claims 3-6 and 8-10 these claims are rejected for failing to resolve the issues of the previous claims.

Rejections Under 35 U.S.C. 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Sackstein et al. WO 98/45959
6. Re claim 1, Sackstein discloses an image compression device comprising: an encoding unit performing predictive coding of an input video sequence having a plurality of frames. (See Page 3 15-20.) Note a MPEG encoder is used here. A first unit leaving a first set of frames (see page 3 line 8-10 the first set is the set selected by sub sampling) at predetermined intervals (i.e. predetermined duty cycle in page 3 line 12) in the input video sequence(i.e. video signal page 3 line 11) to cause the encoding unit (page 3 line 13) to perform predictive coding (page 3 line 16 IP encoding is predictive) of the first frames. Note the system is sub-sampled and the

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sub-sampled signal is compressed therefore a set of frames occurring at predetermined intervals is chosen by a unit, for the purpose of predictive MPEG coding. A second unit discarding a second set of frames (see page 3 line 8-10, the second set is the set not selected by sub sampling), which lie between two of the first set of frames (page 3 line 11, sub sampling implies this) in the input video sequence (i.e. video signal page 3 line 11), to cause the encoding unit (page 3 line 13) to skip each second frame (page 3 line 8-10, sub sampling implies this) and perform predictive coding (page 3 line 16 IP encoding is predictive) of a corresponding one of the first frames immediately preceding the second frame (page 3 lines 17-20). Note in the removed frames are replaced by P-frames which denote that all information is contained in the previous frame (predictive coding of a corresponding one of the first frames immediately preceding the second frame). An output unit (see page 5 lines 20-27 note the compressed data is stored so it must be outputted by an output unit) outputting only encoded data (page 5 line 27 MPEG video is encoded data) of the first set of frames created by the encoding unit in association with the first unit as a result of the predictive coding of the entire input video sequence (i.e. complete frame set page 3 line 23).

7. Re claim 2 Sackstein further discloses wherein the first frames that are left are either intra-coded pictures (I-frame) or predictive-coded pictures (P-frame) (i.e. IP encoding) contained in the input video sequence (see Page 3 lines 16 and figure 1 element 50A.) The second set of frames (not selected by the sub sampling see page

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3 lines 11-12), which are discarded, are pictures contained in the input video sequence (ie video signal see page 3 line 11).

8. Re claim 3 Sackstein further discloses wherein the encoded data of the first frames created by the encoding unit is stored in a storage device (ie. Storage area page 5 line 27) having a predetermined storage capacity (All storage devices have a predetermined capacity) as a result of the predictive coding of the entire input video sequence (i.e. complete frame set see page 3 line 23).
9. Re claim 4 Sackstein further discloses wherein the encoding unit (encoder 304 figure 3 page 19 line 15), the first unit, the second unit (controller 310 of figure 3 page 19 line 16 these two units are combined in the controller) and the output unit (multiplexer 312 figure 3 page 19 lines 16-17) are arranged in an MPEG2 (see page 1 line 19) encoder (encoding unit 300 figure 3 page 19 line 14) .
10. Re claim 5 Sackstein discloses wherein the encoding unit (elementary stream encoder 502 figure 6 page 21 line 23-24) and the output unit (multiplexer 506 figure 6 page 21 line 23-24) are arranged in an MPEG2 (see page 1 line 19), encoder (elements 502 and 506 page 21 line 23-24) and the first unit and the second unit are arranged in an external control unit (controller 504 figure 6 page 21 line 23-24) connected to the MPEG2 encoder.

11. Re claim 6 Sackstein discloses an image compression method comprising the steps of: leaving first set of frames (i.e. the frames selected by sub sampling, page 3 line 11) at predetermined intervals (i.e. predetermined duty cycle page 3 line 12) in an input video sequence (video signal page 3 line 11) having a plurality of frames (this is inherent in video) to cause an encoding unit (page 3 line 13) to perform predictive coding (page 3 line 16 IP coding is predictive) of the first set of frames. Said encoding unit performing predictive coding of the input video sequence (See Page 3 lines 15-20.) Discarding a second set of frames (i.e. the frames not selected by sub sampling, page 3 line 11), which lie between two frames in the first set of frames (page 3 line 8-10, sub sampling implies this) in the input video sequence, to cause the encoding unit to skip each second frame (i.e. some of the frames are not compressed page 3 lines 9-10) and perform predictive coding of a corresponding one of the first frames immediately preceding the second frame (note in page 3 lines 17-20 the removed frames are replaced by P-frames which denote that all information is contained in the previous frame (predictive coding of a corresponding one of the first frames immediately preceding the second frame)). Outputting (see page 5 lines 20-27, the data is stored somewhere so it must be outputted) only encoded data of the first set of frames (i.e. only the compressed frames page 3 lines 9-10) created by the encoding unit in association with the leaving step (subsampling page 3 line 11) as a result of the predictive coding (IP coding page 3 line 16) of the entire input video sequence.

12. Re claim 7 Sackstein further discloses wherein the first frames that are left are either intra-coded pictures (I-frame) or predictive-coded pictures (P-frame) (i.e. IP encoding) contained in the input video sequence (see Page 3 lines 16 and figure 1 element 50A.) The second set of frames (not selected by the sub sampling see page 3 lines 11-12), which are discarded, are pictures contained in the input video sequence (ie video signal see page 3 line 11).
13. Re claim 8 Sackstein further discloses wherein the encoded data of the first frames created by the encoding unit is stored in a storage device (ie. Storage area page 5 line 27) having a predetermined storage capacity (All storage devices have a predetermined capacity) as a result of the predictive coding of the entire input video sequence (i.e. complete frame set see page 3 line 23).
14. Re claim 9 wherein the encoding unit (encoder 304 figure 3 page 19 line 15) is arranged in an MPEG2 (page 1 line 19) encoder (encoding unit 300 figure 3 page 19 line 14), and the MPEG2 encoder performs the predictive coding (preformed by encoder 304 figure 3 page 19 line 15), the leaving step, the discarding step (preformed by the controller 310 figure 3 page 19 line 16), and the outputting step (multiplexer 312 figure 3 page 19 lines 16-17).
15. Re claim 10 Sackstein further discloses wherein the encoding unit (elementary stream encoder 502 figure 6 page 21 line 23-24) is arranged in an MPEG2 encoder

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so that the MPEG2 (page 1 line 19) encoder (elements 502 and 506 page 21 line 23-24) performs the predictive coding and the outputting step (multiplexer 506 figure 6 page 21 line 23-24), and an external control unit connected to the MPEG2 encoder is arranged so that the external control unit (see figure 6 element 504 page 21 lines 23-24) performs the leaving step and the discarding step.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean Motsinger whose telephone number is 571-270-1237. The examiner can normally be reached on M-F.
17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu, can be reached at 571-272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


JINGGE WU
SUPERVISORY PATENT EXAMINER

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18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Motsinger
1/19/2006